NOTICE!

ALL DRAWINGS
ARE LOCATED
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THE DOCUMENT

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ENGINEERING-SCIENCE, INC. *a unit of*
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October 3, 1994
SP307 100394 03

Mr Andy Ledford
EG&G Rocky Flats, Inc
Rocky Flats Environmental Technology Site
P O Box 464, Building 080
Golden, Colorado 80402-0464

Subject MTS 343756 GG
OU4 Solar Ponds IM/IRA
Submittal of Revised Utility Verification Work Plan

Dear Mr Ledford

Enclosed is a slightly revised copy of the Utilities Verification Work Plan for information The change includes requesting that the transect survey be completed after the GPR work is performed instead of before In addition, the reference to GPR work in the RCA has been deleted

Please call me at 764-8811 or pager 687-2551 if you have any questions

Sincerely,

for

Philip A Nixon
Project Manager Solar Pond IM/IRA

cc

M Austin, EG&G
M McKee, EG&G
R Popish (2), EG&G
P Breen
D Creek
B Cropper
W Edmonson
J Evans
H Heidkamp
N Hilmar
P Holland
S Hughes
R Lux
JP O'Brien
A Putinsky
C Rosé
R Schmiermund
R Stegen
S Stenseng
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1/7

UTILITIES VERIFICATION WORK PLAN

TABLE OF CONTENTS

2/7

1.0 INTRODUCTION

The purpose of this field work plan is to verify the location of existing utilities located within the area of the Solar Evaporation Ponds (SEPs) This project is being undertaken in support of the proposed engineered cover as identified within the Interim Measure/Interim Remedial Action (IM/IRA) Decision Document for Operable Unit 4 (OU4) The objective of this work plan is to verify the location of utilities prior to the commencement of excavation activities. This investigation is considered a crucial aspect of the OU4 IM/IRA due to the potential for worker injury, and/or construction downtime or environmental contaminant release, as well as disrupting utilities which support ongoing site operations and maintenance functions.

This document only addresses the field activities associated with the utilities verification involving a ground penetrating radar (GRP) survey, personnel interviews, and field verification of utilities.

2.0 OBJECTIVES

Data collected during the utilities verification field program will be used to accurately locate and identify utilities within the SEP vicinity prior to commencing construction operations for the engineered cover A GPR survey will be utilized for verifying the utility locations indicated in Figure 1 as well as identifying any additional utilities not previously disclosed.

3.0 PERSONNEL INTERVIEWS

Personnel who work in surrounding buildings will be interviewed for verification of Figure 1 components such as utility origin, location, status, and service Personnel within the construction management department responsible for soil disturbance permits will also be interviewed to verify aspects of the drawings RFP engineering, operations, and maintenance personnel may also be interviewed to determine current utility use

4.0 UTILITIES VERIFICATION PLAN

The utilities verification plan is broken down into two tasks· the verification plan tasks and the implementation tasks

4.1 Verification Plan Tasks

The following onsite preliminary investigative tasks should be accomplished to provide detailed information for closure of the SEPs area

3/7

- Verification

  - This task includes a determination of "service status" (abandoned or active) for each pipeline, electrical power line, and telephone cable listed

  - Those utility systems that are deemed inactive or abandoned will be categorized and identified for removal. The basis for the decision to remove a utility system is contingent upon the implementation requirements of the selected remedial alternative. Any currently functioning utility system will be evaluated for future use once remediation of the OU4 SEP area has been completed. Active utilities that need to remain in-service after closure of the SEPs will require rerouting. Coordination for temporary service will be required.

- Location

  - The physical location of each item, as shown on Figure 1, should be verified using surface landmark/site survey, and ground penetrating radar.

  - Several of the services identified on Figure 1 are routed adjacent to the SEP areas and in some cases parallel the fence and perimeter road. Although these services may not require alteration to accomplish pond closure, verification of their exact location is required due to excavation activities. This verification plan focus is to ensure that any excavation/earthwork activity can be accomplished without endangering workers, interrupting utilities, or disrupting other site operations.

4.2 Implementation

Each item identified on the service drawings should be taken through the following steps:

- Verification

  - Verify the location rerouting and connections as shown on the existing RFP utilities drawings.

  - Interview RFP engineering, operations, and maintenance personnel to determine present utility use

  - Field-verify utility user locations Compile a list of buildings, equipment, and systems requiring service

4/7

- Location

  - Review the utility location given on the existing RFP utilities drawing as listed on Drawing 51045-440 Identify any noted landmarks (ground penetrations, valve boxes, building intrusions, or other landmarks)

  - Interview RFP engineering, operations, and maintenance personnel to determine if any recent activities (surveys, maintenance, or construction) may have involved the utility being investigated.

  - Field-verify the location of any landmarks that have been identified during the drawing review or personnel interviews.

  - GRP can be used at this point in the location activities to determine approximate depth and location of the utility If the utility being traced is in close proximity to other buried utilities and piping, GPR should verify an area for future exploratory excavation

  - Exploratory excavation should be used to verify any utility location that cannot be verified by GPR, surface landmark, certified prior survey documents, or other documents that EG&G will certify as providing accurate location of the utility being traced. (Exploratory excavation would be performed in the future under a separate task order.)

4.3 Service Requirements

Determine users of domestic cold water, raw water, electrical power, and telephone services

- Interview operations, engineering, and maintenance personnel to determine the impact of service interruption in the OU4 area

- Locate shut-off/isolation valves and show the locations on the utilities drawings.

- Locate electrical disconnects and update the utilities drawings to show locations.

- Prepare a utilities shut-down schedule and coordinate construction activities with utility user's requirements

5.0 GROUND PENETRATING RADAR SURVEY

The GPR survey is designed as a grid of East-West and North-South lines around the SEPs as depicted in Figure 1 The lines around the perimeter of the ponds which are located outside the Radiologically Controlled Area (RCA) boundary will be surveyed first. The lines

5/7

between Pond 207-A and 207-B series ponds, located inside the RCA boundary, will be surveyed only if necessary and are considered to be optional.

The GRP lines will be laid out by the GPR field crew as illustrated in Figure 1. Final location of the survey lines will be adjusted by the GPR field crew to allow for the presence of cultural features such as fences, overhead power lines, and concrete security barriers The lines will be marked in an appropriate visible manner. An EG&G survey crew will determine the survey coordinates of the lines after the GPR survey is completed Because of the variability in penetration depth of different antennas, the equipment used for completing the GPR survey will be tested to determine which antenna is most effective

The optional GPR lines between 207-A pond and 207-B series ponds are within a Radiologically Controlled Area (RCA) and will require the appropriate health and safety support. The remainder of the lines around the perimeter of the ponds will initially be located outside the RCA boundary If work within the RCA is deemed necessary, it will be performed according to procedures specified by EG&G Radiological Engineering.

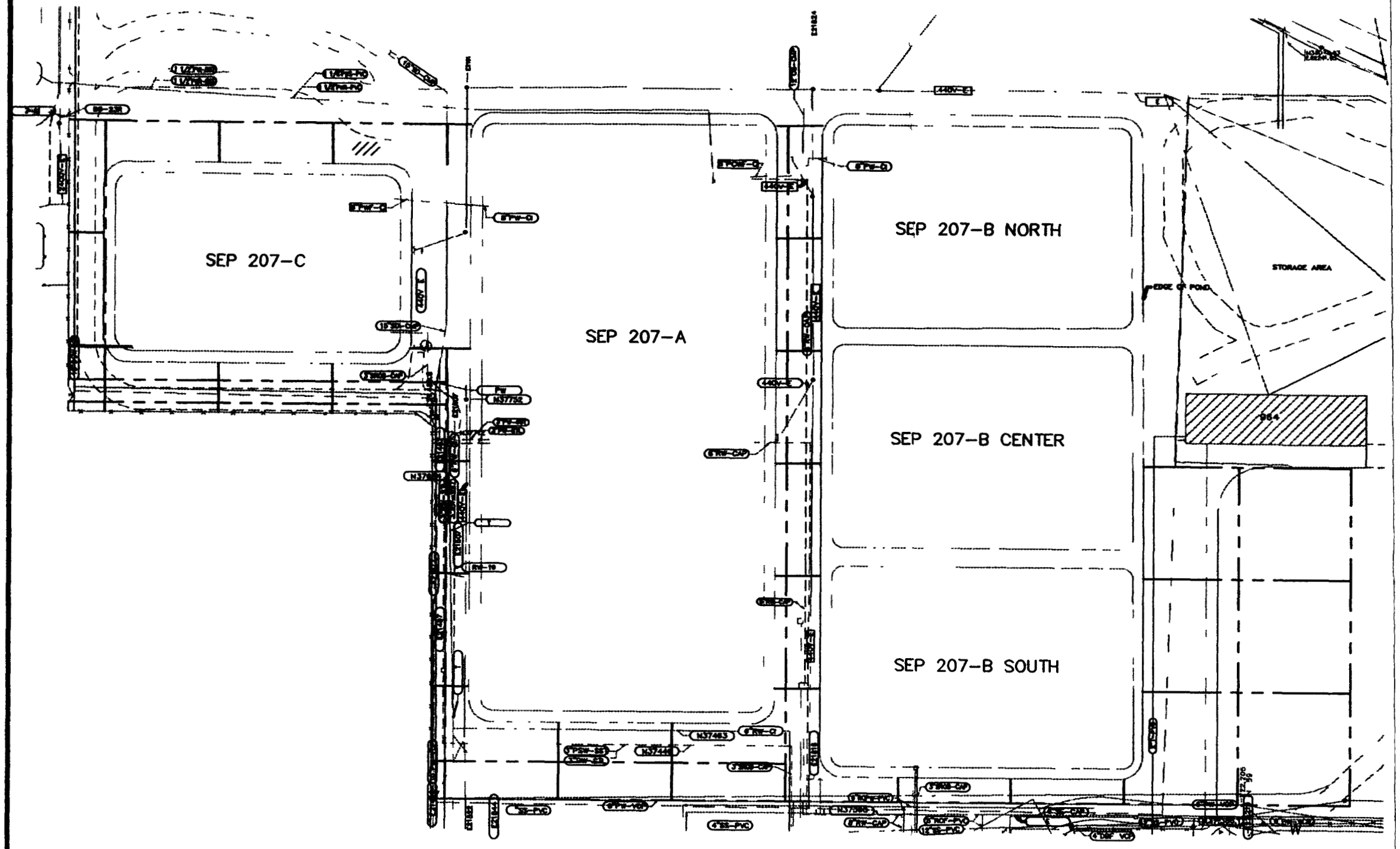
6.0 QUALITY ASSURANCE PLAN

The utilities verification work plan will be performed using applicable EG&G Operating Procedures (SOPs), and will be covered by the applicable parts of the quality assurance plan (QAP) specified in the Phase II RFI/RI work plan.

7.0 HEALTH AND SAFETY PLAN

Health and Safety procedures specified in the OU4 Final Health and Safety Plan will be followed during implementation of this work plan In addition, procedures listed in the Environmental Management Radiological Guideline Manual will be followed. Details of radiological operations will be coordinated through EG&G Radiological Engineering.

6/7



LEGEND

- BUILDING
- FENCE
- GROUND PENETRATING RADAR SURVEY

NOTE

SURVEY LINES LOCATED BETWEEN SEP 207-A AND SEP 207-B SERIES PONDS ARE OPTIONAL

0 50 100 200
FEET

FIGURE 1

UTILITIES VERIFICATION SURVEY

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Golden Colorado

ENGINEERING-SCIENCE, INC
Denver Colorado

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7/7